AMSAT News Service Weekly Bulletins
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AMSAT NEWS SERVICE
ANS-239

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:
ans-editor at amsat.org

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* Reminder: Ballots for the AMSAT-NA Board of Directors Election *
* are due by mail by the close of business on September 15, 2012 *
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ANS-239 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 239.01
>From AMSAT HQ SILVER SPRING, MD.
August 26, 2012
To All RADIO AMATEURS
BID: $ANS-239.01

AMSAT 2012 Space Symposium On-Line Registration Opens

AMSAT announces that the registration for the 2012 AMSAT Space Symposium, to be held on Friday, October 26th through Sunday, October 28th is now open on-line. A mail-in option is also available those preferring this approach.

See the AMSAT Web Store to complete your on-line registration: http://store.amsat.org/catalog/ - then click on the "AMSAT 2012 Symposium" item in the top left box on your web browser.

Downloadable paper registration forms in MS-Word format and PDF format are available on the 2012 Symposium page: http://www.amsat.org/amsat-new/symposium/2012/index.php

Prices for the Symposium are:
+ Symposium Registration including Proceedings
  o Through September 23, 2012: $ 45.00
  o Starting September 24, 2012: $ 50.00
  o At the Door: $ 55.00

+ Saturday Evening Banquet $ 45.00

+ Sunday Morning Area Coordinators' Breakfast $ 15.00

+ Monday (Oct 29) bus trip to KSC and entrance ticket $ 100.00

The Symposium weekend will feature:

+ Space Symposium with Amateur Satellite Presentations
+ Operating Techniques, News, & Plans from the Amateur Satellite World
+ Board of Directors Meeting open to AMSAT members
+ Meet Board Members and Officers
+ Annual General Membership Meeting
+ Annual Banquet-Keynote Speaker and Door Prizes

The Symposium Hotel is the Holiday Inn at Orlando-International Airport is located one mile from the Orlando International Airport (MCO). The AMSAT discount rate is $99 + taxes per night. The reservation block code used when calling the hotel directly is AMT.

The hotel telephone number is 407-851-6400. The Symposium Committee recommends you make reservations by calling the hotel directly rather than through the Web. Cutoff date for reservations is Oct 6, 2012. The direct link to the hotel web page is:
http://www.holidayinn.com/hotels/us/en/orlando/mcoap/hoteldetail

The hotel offers free Internet connection and free airport shuttle. When you arrive at the Orlando Airport call 407-709-5310 to request the shuttle.

The Orlando International Airport (MCO) is the closest to the Symposium and is served by most major air carriers. The hotel address is: 5750 T.G. Lee Blvd ' Orlando, FL 32822. A map link is included on the hotel web page.

[ANS thanks the 2012 Symposium Committee for the above information]

AMSAT 2012 Space Symposium Second Call for Papers

Symposium Proceedings Editor, Dan Schultz, N8FGV issued the second Call For Papers for the 2012 AMSAT Annual Meeting and Space Symposium to be held in Orlando, Florida on the weekend of October 26-28, 2012.

Proposals for papers, symposium presentations and poster presentations are invited on any topic of interest to the amateur satellite community:

+ Papers for publication in the Proceedings

+ Symposium Presentations

+ Poster Presentations

+ Equipment and Operating Demonstrations

Dan requests a tentative title of your presentation as soon as possible, with final copy to be submitted by October 1 for inclusion in the printed proceedings. Abstracts and papers should be sent to Dan Schultz, N8FGV, at n8fgv@amsat.org

The Symposium Committee still has prime slots available on the speaker's schedule. The AMSAT Symposium depends on YOU to make it happen, without speakers there is no Symposium.

Please consider doing a presentation, even if you have never done so in the past. We are especially interested in papers and presentations involving our educational partnerships with K-12 and university level classrooms. Education is quickly becoming critical for our future rides to space.

[ANS thanks 2012 Symposium Proceedings Editor Dan Schultz, N8FGV for the above information]

Rooms Still Available for AMSAT-UK Colloquium

AMSAT-UK Hon Sec Jim List, G3WGM says, "There are still rooms available at the hotel at which the AMSAT-UK Colloquium will be held on September 14, 15 and 16. The location of the Colloquium is at the Holiday Inn, Guildford, Surry, UK. TO BE SURE OF A ROOM AT THE HOTEL YOU SHOULD BOOK AS SOON AS POSSIBLE TO AVOID DISSAPPOINTMENT!"

The Colloquium is a truly international event and will include:

+ New this year will be guided tours of the new SSTL satellite construction facility, the Kepler Building, including a view of the clean rooms. This facility has been open less than a year, and is hugely impressive! Numbers on the tours are limited and strictly first come first served basis. Detailed timings to follow.

+ Presentations by experts from AMSAT-SA, AMSAT-NA and AMSAT-DL on their current spacecraft projects.

+ CubeSat presentations on UKube-1, STRaND-1, STRaND-2 and, of course the FUNcube-1 project.

+ We will be including an exclusive roundup of a number of new live and potential spacecraft projects that are under investigation and/or development.

+ Additionally a number of presentations are planned covering new communications techniques and similar futuristic topics.

+ Plus all the usual networking opportunities, the gala dinner and auction/raffle, plus the opportunity to operate the sophisticated groundstation in the GB4FUN mobile demonstration module.

Exclusive New Product Launch at AMSAT-UK Colloquium

AMSAT-UK are delighted to announce that Howard Long, G6LVB, will be present at the Colloquium this year and will be launching a new "FUNcube Dongle PRO-PLUS" during his presentation.

Full technical details have been embargoed until his talk and we are not permitted to steal his thunder by releasing further details of

this new product in advance. Attendees at the Colloquium will therefore be the first to learn about Howard's latest development which will further advance the applications for SDR devices.

Further details are at: http://www.uk.amsat.org/9565#more-9565 - and at - http://www.uk.amsat.org/colloquium/twelve.

You can book online using PayPal or Credit Card at: http://shop.amsat.org.uk/shop/catalog/browse

[ANS thanks AMSAT-UK Hon Sec Jim List, G3WGM and Trevor, M5AKA for the above information]

Successful ARISS Contacts With Australia and Japan

An ARISS contact was held with students at the Kangaroo Inn Area School in Kangaroo Inn, South Australia on Tuesday, August 14 via station W6SRJ in California. ISS astronaut Sunita Williams, KD5PLB participated in the session, answering over 20 questions posed by the students. Nearly 90 visitors attended the event, including local politician Mitch Williams and his wife, the ABC (Australian Broadcasting Corporation) radio network, WIN 8 regional TV and representatives from three newspapers. The contact complemented a science curriculum covering space and space exploration.

On Thursday, August 16, an ARISS contact was held between students attending Wada Elementary School in Nagawa Town, Japan and Akihiko Hoshide, KE5DNI, aboard the Space Station, which highlighted a comprehensive education plan covering space, astronomy and radio communications. The event drew an audience of approximately 120 students and guests and garnered extensive media coverage including six television stations and five newspapers.

US East Coast ARISS Contact September 1

An ARISS contact with the National Electronics Museum, Linthicum, Maryland is planned for Saturday, September 1 at 15:09:11 UTC. This 42[illegible] elevation pass with a direct contact via K3CUJ should be heard along the US East Coast on the 145.800 MHz downlink.

[ANS thanks Carol Jackson, KB3LKI, and Charlie Sufana, AJ9N for the above information]

South Africa University CubeSat With HF Beacon to Launch in November

South African Radio League, SARL News reports that a new CubeSat designed and built by students at the Cape Peninsular University of Technology in Bellville will be launched towards the end of November.

Known by its engineering name ZACube-1, the satellite will be shipped in the next few weeks to Holland where it will be integrated with two other CubeSats in the launch carrier before being shipped for integrating with the DNEPR rocket, joining up to 18 other amateur radio satellites on this launch. (See: http://www.uk.amsat.org/7717)

ZACube-1 carries a HF transmitter operating on 14.099 MHz which will

be used for characterization of Hermanus Magnetic Observatory's Dual Auroral Radar Network antenna at SANAE base in Antarctica.

Also aboard ZACube-1 will be a small camera and a telemetry transmitter. Monitor this link at SARL for the audio of an interview with the satellite's project leader:
http://www.amateurradio.org.za/Amateur%20Radio%20TODAY.htm
SA AMSAT has also posted detailed news at:
http://tinyurl.com/ZACube

The IARU Amateur Satellite Frequency Coordination Panel list these frequencies:
+ Beacon 14.099 MHz
+ Uplink 145.860 MHz
+ Downlink 437.345 MHz.

[ANS thanks SA AMSAT, SARL, and AMSAT-UK for the above information]

Mars Landing Received Signals Recording Posted On-Line

An interesting article posted at UniverseToday.com tells more of the technical details of the Entry, Descent, Landing (EDL) phase when the Curiosity Mars Rover landed on Mars. The article also provides a link to the X-band radio signals received during landing.

With a 14 minute radio delay because of the distance between Earth and Mars, how did the JPL team know what was happening on Mars?

UniverseToday describes the signaling process between Mars and Earth: (http://tinyurl.com/MarsEDLTones - universetoday.com)

The Mars Science Lander sent out different tones for each event that happened, and 128 distinct tones indicated when steps in the process were activated; one sound indicated the parachute deployed, while another signaled that the vehicle was in powered flight, and still another that the Sky Crane had been activated. These sounds were a series of basic, special individual radio tones.

They were simple tones, transmitted in X-band, comparable to semaphore codes, rather than full telemetry. The Deep Space Network listened for these direct-to-Earth transmissions. However, Earth went out of view of the spacecraft, "setting" below the Martian horizon, partway through the descent, so the X-band tones were not available for confirming the final steps in descent and landing. By then, the bent-pipe relay of telemetry via the Odyssey spacecraft had begun.

Also listening was the Mars Express spacecraft. It recorded about 20 minutes of the rover's transmissions and tones. ESA engineers have now put together an audio reproduction, compressing the 20 minutes into about 19 seconds of audio that humans can hear that are a "faithful reproduction of the 'sound' of the NASA mission's arrival at Mars
and its seven-minute plunge to the Red Planet's surface," the European Space Agency team wrote. You can listen to the audio on this link:
http://blogs.esa.int/mex/files/2012/08/Audio_MELACOM_B_MSL_EDL.mp3

[ANS thanks UniverseToday.com for the above information]

Check Your Keps - ISS Orbit Successfully Readjusted

Space-Travel.com reported on August 22that Europe's ATV-3 unmanned supply spacecraft has raised the International Space Station's orbit to about 261 miles.

The successful orbital readjustment follows a failed attempt August 15 when the ATV-3's engines shut down prematurely because of an increase in temperature on one of the units, leaving the ISS short of its intended orbital height, RIA Novosti reported.

The orbit adjustment Wednesday was done in two stages, with the ATV-3 engines firing for 348 seconds to lift the orbit to 257 miles followed by another burn four hours later that brought the space station to its final altitude.

The maneuver was to prepare for the return to earth of Russia's Soyuz TMA-04M manned spacecraft on September 17 and the docking of the Soyuz TMA-06M manned spacecraft with the ISS on October 15.

Original news item published at:
http://tinyurl.com/ISS-Reboost (www.space-travel.com)

[ANS thanks Spece-Travel.com for the above information]

Help Wanted: AMSAT News Service Rotating Editor Positions Available

The AMSAT News Service (ANS) is responsible for researching, writing, editing, and publishing the weekly amateur satellite news bulletins.

After the passing of Dee, NB2F, we currently have a two editors who take a turn weekly to publish the bulletins. With the addition of a volunteer, or two, this would generally involve taking a turn about every 3 to 4 weeks.

At present we a looking for interested satellite enthusiasts to join the ANS editorial team. Professional writing/editing experience is NOT a requirement. Your interest and enthusiasm in following and reporting on amateur radio in space will get you started! The ANS Editor team helps each other by rounding up items of interest. Plus we receive submitted items for publication ... so you won't be left all alone!

If you can commit to working on the bulletins for a week on a rotating basis please reply via e-mail to AMSAT News Service Editor JoAnne Maenpaa, K9JKM via k9jkm@amsat.org.

[ANS thanks AMSAT Vice-President User Services, Gould Smith, WA4SXM for the above information]

NASA Announces SpaceX Cargo Missions to ISS Begin in October

CAPE CANAVERAL, Fla. - NASA Administrator Charles Bolden announced Thursday [August 23, 2012] new milestones in the nation's commercial space initiatives from the agency's Kennedy Space Center in Florida. The latest advances made by NASA's commercial space partners pave the way for the first contracted flight of cargo to the International Space Station (ISS) this fall and mark progress toward a launch of astronauts from U.S. soil in the next 5 years.

Bolden announced Space Exploration Technologies (SpaceX) has completed its Space Act Agreement with NASA for Commercial Orbital Transportation Services (COTS). SpaceX is scheduled to launch the first of its 12 contracted cargo flights to the space station from Cape Canaveral in October, under NASA's Commercial Resupply Services Program.

Through the COTS program, NASA provides investments to stimulate the American commercial space industry. As part of its COTS partnership, SpaceX became the first commercial company to resupply the space station in May, successfully launching its Falcon 9 rocket and Dragon spacecraft to the orbiting complex. During the historic mission, the Dragon was captured by astronauts using the station's robot arm, unloaded and safely returned to Earth carrying experiments conducted aboard ISS. Later this winter, Orbital Sciences Corp. plans to carry out its first test flight under COTS.

The full NASA press release can be found on-line at:
http://www.nasa.gov/exploration/commercial/crew-cargo-milestones.html

[ANS thanks NASA for the above information]

Satellite Shorts From All Over

+ AMSAT joins all of the spacefaring people of Earth in remembering a hero for mankind on the passing on August 25 of Neil Armstrong, the first man to walk on the Moon. Armstrong was 82.

+ AMSAT has received the sad news of the passing QST Managing Editor Joel P. Kleinman, N1BKE, of Meriden, Connecticut. Joel died from injuries received during a house fire. He was 64. Kleinman was responsible for the coordination, organization, control and completion of all aspects of QST's editorial content each month. Kleinman's wife Jayne survived the fire, but is currently in the intensive care unit of a local hospital. The ARRL is collecting condolence messages to forward on to Joel's family. If you would like send a message, please email it to: news@arrl.org.

+ Members of the Grupo DX Caracas announced their YW5B DXpedition to La Blanquilla Island (SA-037) between August 21-27. Activity will be on 160-2 meters using CW, SSB, FM, Satellites and the Digital modes. QSL Manager is DM4TI with instructions on his QRZ.com page. (Ohio/Penn DX Bulletin No. 1075)

+ A video about the amateur radio F-1 CubeSat that is due to be deployed from the International Space Station in September by Japanese astronaut Akihiko Hoshide KE5DNI using the ISS Kibo robot arm can be viewed on the AMSAT-UK web at:
http://www.uk.amsat.org/9746
It was broadcast on the Vietnamese TV station VTC2 and features interviews with Thu Trong Vu XV9AA, Hong Thai Pham and Pham Quang Hung along with a graphics clip showing the proposed deployment of the CubeSat. Part of the interview is held on the roof of the FPT

university and shows the antenna array that will be used to command the F-1 CubeSat.

+ Scouts from all over the United States came to this year's Space Jam 6 sponsored by Crew 272 and Troop 17 where a ARISS contact with the ISS was held. Scouts talked with Japanese (JAXA) Astronaut Akihiko Hoshide KE5DNI using the WB9SA Satellite Communications Ham Radio Station on August 5, 2012. Watch on-line at: http://tinyurl.com/SpaceJam6-ARISS-Contact (www.southgatearc.org)

+ Photos from Mars keep coming in. An HD quality video of Curiosity's descent was assembled from full-resolution 1600�1200 frames from the MARDI descent imager. It also shows the best views yet of the heat shield impact on the surface of Mars:

https://www.youtube.com/watch?feature�ayer_embedded&v�X5GRPnd4U

+ Add this to your wish list - a personal Unmanned Aerial Vehicle (UAV) is now available. The drone in this video one uses a 2.4 GHz WiFi connection to an iPhone or iPad: http://www.youtube.com/watch?feature�ayer_embedded&v�vGvaNnMJM http://tinyurl.com/Personal-UAV (Southgate ARC)

+ Watch a video by KB3TQO posted on Southgate that shows a simple way to launch amateur radio antennas into the trees, really high. He demonstrates his homemade, bicycle pump powered, air cannon at: http://www.southgatearc.org/news/august2012/antenna_cannon_video.htm

+ The team from Mars Express put this great video together which shows what Mars looks like from above, during an elliptical orbit. They created it using 600 individual still images captured by the Visual Monitoring Camera (VMC), and it shows the view from a visiting spacecraft�s slow descent from high above the planet, then speeds up during closest approach, and then slows down again as the orbital distance increases. Orbit Mars via your browser at: http://www.youtube.com/watch?feature�ayer_embedded&v�6EmDQcsy0

+ The next Hudson Valley Satcom net date is Thursday, August 30, at 8 PM EDT (UTC-4 UTC) on the 146.97 MHz MBARC Repeater (PL 100). An echolink connection is available on the N2EYH-L node. More information at: http://www.hvsatcom.org. (Stu, WA2BSS)

+ NASA announced that for its 50th anniversary celebration it will be opening its gates for "virtual tours" through a partnership with Google Maps and its Street View feature. With over 6,000 panoramic images of the space center you are only a click away at: http://tinyurl.com/SpaceCenterStreetView (maps.google.com)

+ Do you want to live on Mars time? There's an App for that now. Read the article at http://tinyurl.com/MarsTimeApp to decide which one is right for you. (UniverseToday)

+ Photos showing the deployment of the small Russian Sfera satellite from the Space Station by Russian cosmonaut Gennady Padalka, RN3DT, Expedition 32 commander, during this week's EVA can be seen at: http://www.onorbit.com/node/4890.

[ANS thanks everyone for the above information]

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In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information. And with that, please keep in mind the August 16 - 17 temperatures measured by NASA's Curiosity rover reported that ground temperature ranged between minus 131.8° F to +37° F; air temperature

in Gale Crater ranged between minus 103° F and +28° F. That's what

being 50% farther from the sun than Earth will do for you.

73,
This week's ANS Editor,
JoAnne Maenpaa, K9JKM